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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,300	09/08/2003	Eric Stephen Mattis	030296	2134
23696	7590	09/09/2005		
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			EXAMINER PRESTON, ERIK D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/658,300

Applicant(s)

MATTIS ET AL.

Examiner

Erik D. Preston

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: In the 5<sup>th</sup> line of the claim, the phrase "...said horn..." lacks proper antecedent basis and, for examination purposes, will be interpreted as saying "...said antenna horn..." Appropriate correction is required.

Claim 12 is objected to because of the following informalities: In the 1<sup>st</sup> line of the claim, the phrase "...the coaxial cable..." lacks proper antecedent basis and, for examination purposes, will be interpreted as saying "...the electrical conductor..." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3,10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Studer et al. (US 4321572).

With respect to claim 1, Studer teaches an apparatus for providing electrical coupling, comprising: a motor (which inherently exists) having a hollow, rotational shaft (Fig. 6, #107) for allowing electrical signals to pass there through and an antenna horn (Fig. 1, #16) rotatable about said shaft, said shaft being disposed coaxially with said antenna horn on an axis of said horn which extends through a plane in which said antenna horn is rotatable.

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With respect to claim 2, Studer teaches the apparatus of claim 1, wherein said shaft comprises a conductor, the shaft for conducting electrical signals through said motor.

With respect to claim 3, Studer teaches the apparatus of claim 1, further comprising an electrical conductor located within said shaft for providing said electrical signals through said motor.

With respect to claim 10, Studer teaches the apparatus of claim 3, further comprising a platform (the upper surface of Fig. 1, #12) connected to the shaft wherein the conductor is fixed with respect to the shaft.

With respect to claim 11, Studer teaches the apparatus of claim 3, further comprising a platform connected to the shaft, wherein the conductor is affixed to the shaft and rotates therewith.

With respect to claim 12, Studer teaches the apparatus of claim 3, wherein the electrical conductor comprises an outer conductor (Fig. 6, #110), a dielectric (Fig. 6, #106), and a center conductor (Fig. 6, #102), wherein the dielectric and the center conductor are fixed (to one another), and the outer conductor is fixed to said shaft (it is a part of the shaft).

With respect to claim 13, Studer teaches the apparatus of claim 1, wherein said shaft comprises: A dielectric material (Fig. 4, #106) within said shaft and affixed thereto; and a center conductor within said dielectric material.

***Claim Rejections - 35 USC § 103***

Claims 4-6 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Studer et al. (US 4321572) in view of Kumasaka et al. (US 2002/0034152).

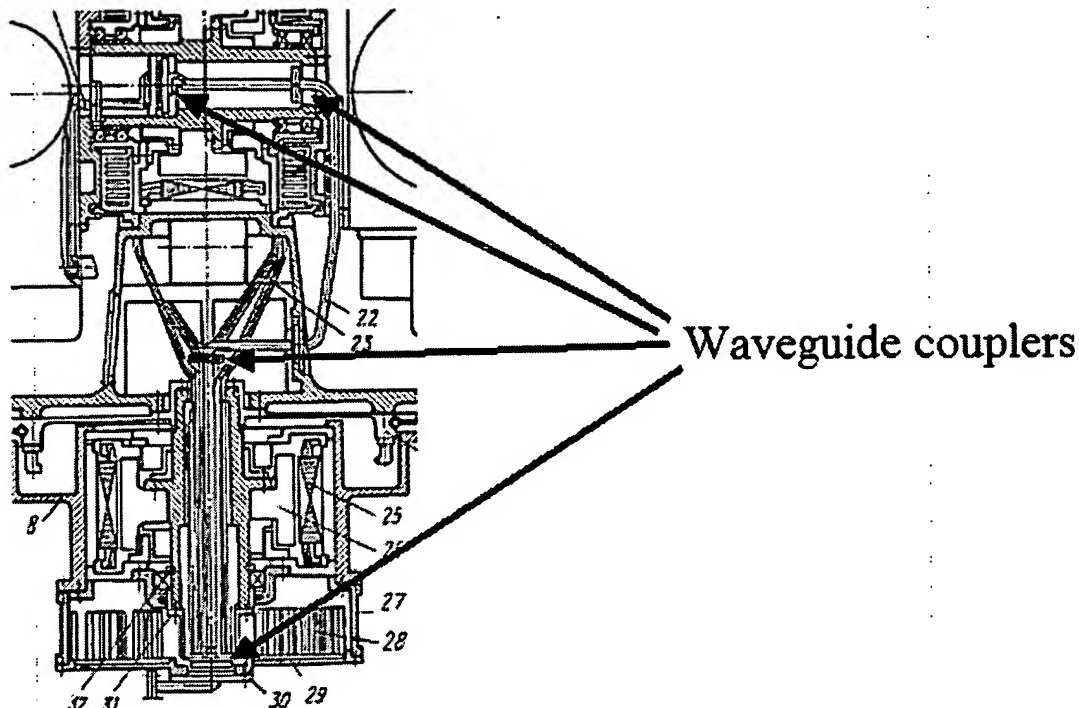
With respect to claims 4-6 & 9, Studer teaches the apparatus of claim 3, but it does not teach the electrical conductor comprising a coaxial cable or a rotational coupling for coupling said electrical signals between a second conductor and the conductor. However, Kumasaka teaches a coaxial cable (Fig. 3, #31) and a rotational coupler (Fig. 3, #61) for coupling said electrical signals between a second conductor and the conductor. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the hollow shaft of Studer in view of the hollow shaft as taught by Kumasaka because it provides an equivalent means for routing a signal through a rotating shaft without the use of sliding contacts, which is the same problem that Studer is attempting to alleviate (Studer, Abstract).

Claims 7 & 8 are rejected under 35 U.S.C. 103(a) as being anticipated by Studer et al. (US 4321572) in view of Belyanskii et al. (RU 2165582 C2).

With respect to claim 7, Studer teaches the apparatus of claim 1, but it does not teach the shaft additionally comprising a waveguide. However, Belyanskii teaches a waveguide (Fig. 2, #22). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the hollow shaft of Studer in view of the waveguide as taught by Belyanskii because it provides a means for communicating signals from an antenna to a guidance and control system (Belyanskii, Abstract).

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With respect to claim 8, Studer in view of Belyanskii teaches the apparatus of claim 7, wherein the shaft additionally comprises a waveguide coupler (See diagram below).



### ***Response to Arguments***

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 3739385, US 3896446 & US 4047175.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is 571-272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



09/02/2005



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